

**PHASE I
WATER AVAILABILITY
ANALYSIS**



NAPA COUNTY

DEPARTMENT OF PUBLIC WORKS

1195 THIRD STREET • ROOM 201 • NAPA, CALIFORNIA 94559-3092
PHONE 707-253-4351 • FAX 707-253-4627
www.co.napa.ca.us/PublicWorks/Default.htm

ROBERT J. PETERSON
Director of Public Works
County Surveyor-County Engineer
Road Commissioner

WATER AVAILABILITY ANALYSIS

PHASE 1 STUDY - CURRENT

Introduction: As an applicant for a permit with Napa County, it has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

Step #1:

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessors parcel numbers for these parcels. Identify all existing or proposed wells.

Step #2: Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel.

There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas. Please circle your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor 1.0 acre feet per acre per year
 Mountain Areas 0.5 acre feet per acre per year
 MST Groundwater Deficient Area 0.3 acre feet per acre per year

Assessors Number(S)	Parcel	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
020-450-015 / -016		33.5 ac	0.5 AF/acre	16.75 AF

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:

Residential 0.75 af/yr
 Farm Labor Dwelling 0 af/yr
 Winery 0 af/yr
 Commercial 0 af/yr
 Vineyard* 0.3 af/yr
 Other Agriculture 0 af/yr
 Landscaping 0 af/yr
 Other Usage (List Separately):
 _____ af/yr
 _____ af/yr
 _____ af/yr

PROPOSED USE:

Residential 0.75 af/yr
 Farm Labor Dwelling 0 af/yr
 Winery 0 af/yr
 Commercial 0 af/yr
 Vineyard* 0.3 af/yr
 Other Agriculture 0 af/yr
 Landscaping _____ af/yr
 Other Usage (List Separately):
 _____ af/yr
 _____ af/yr
 _____ af/yr

TOTAL: 1.1 af/yr

TOTAL: 358,436 gallons**

TOTAL: 1.1 af/yr

TOTAL: 358,436 gallons**

*Water use for vineyards should be no lower than 0.2 AF—unless irrigation records are available that show otherwise.

**To determine your existing and proposed total water use in gallons, multiply the totals (in acre- feet) by 325,824 gal/AF.
 325,851

Is the proposed use less than the existing usage () Yes () No (X) Equal

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage of other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary.

This represents the current site conditions (i.e. before the proposed lot line adjustment).

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: Michael R. Muelrath Date: 9/23/2009 Phone: 707-320-4968



Attachment A: Estimated Water Use Guidelines

Typical Water Use Guidelines:

Primary Residence	0.5 to 0.75 acre-feet per year (includes some landscaping)
Secondary Residence	0.20 to 0.30 acre-feet per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year

Non-Residential Guidelines:

Agricultural:

Vineyards	
Irrigation only	0.2 to 0.5 acre-feet per acre per year
Heat Protection	0.25 acre feet per acre per year
Frost Protection	0.25 acre feet per acre per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year
Irrigated Pasture	4.0 acre-feet per acre per year
Orchards	4.0 acre-feet per acre per year
Livestock (sheep or cows)	0.01 acre-feet per acre per year

Winery:

Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

Industrial:

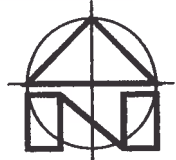
Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

Commercial:

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year

SITE TOPOGRAPHY MAP

REPRESENTS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE "INSERT QUAD NAME"
REPRODUCED FROM NATIONAL GEOGRAPHIC TOPO!
OUTDOOR RECREATION MAPPING SOFTWARE



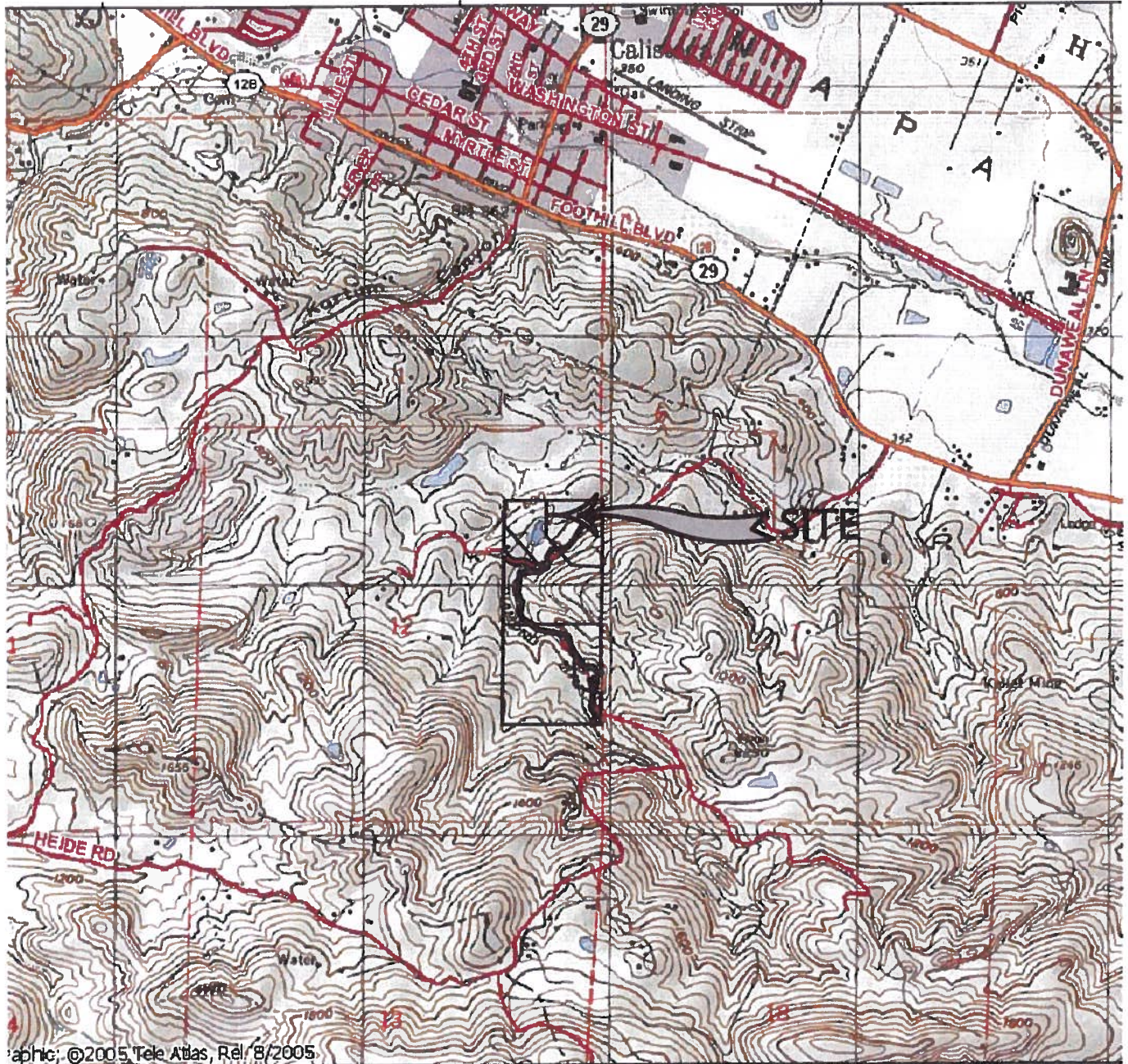
SCALE: 1" = 2,000'

122°36.000' W

122°35.000' W

122°34.000' W

WGS



Graphic: ©2005 Tele Atlas, Rel. 8/2005

122°36.000' W

122°35.000' W

122°34.000' W

WGS



2074 West Lincoln Avenue
Napa, CA 94558
(707) 320-4968 (707) 320-2395 Fax
www.appliedcivil.com

WALLIS WINERY
1670 DIAMOND MOUNTAIN ROAD
CALISTOGA, CA 94515
APN 020-450-014 & PTN -015 / -016

JOB NO. 09-115

SEPTEMBER 2009

DESCRIPTION OF LAND USE:

EXISTING LOT CONFIGURATION

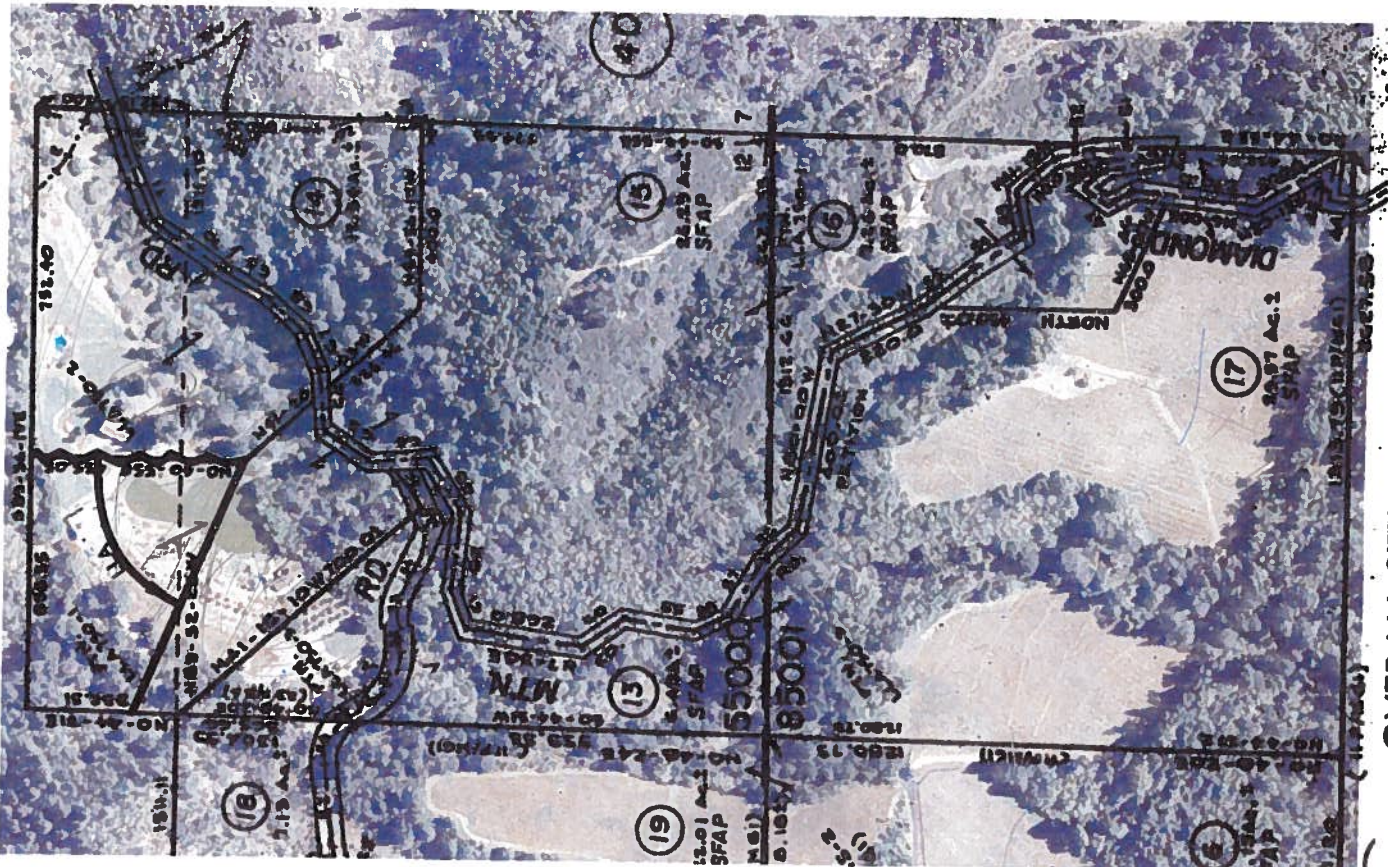
020-450-014	12.34± ACRES	RESIDENCE
020-450-015 / -016	33.49± ACRES	RESIDENCE & 0.3 ACRES VINEYARD

PROPOSED LOT CONFIGURATION

020-450-014 & PTN -015 / -016	16.80± ACRES	WINERY RESIDENCE & 0.3 ACRES VINEYARD
PTN 020-450-015 & -016	29.03± ACRES	

NOTES:

1. PROPERTY LINES ARE BASED ON NAPA COUNTY ASSESSOR'S PARCEL MAPS BOOK 20 PAGE 45.
2. AERIAL IMAGE IS FROM NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM WEBSITE.
3. THIS EXHIBIT IS NOT A SURVEYED OR ENGINEERED PLAN AND IS INTENDED FOR GENERAL INFORMATIONAL PURPOSES ONLY.



OVERALL SITE PLAN EXHIBIT

SCALE: 1" = 400'



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WATER AVAILABILITY ANALYSIS

PHASE 1 STUDY - POST LLA

Introduction: As an applicant for a permit with Napa County, it has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

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Parcel Location Factors

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There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas. Please circle your location classification below (Public Works can assist you in determining your classification if necessary):

- Valley Floor 1.0 acre feet per acre per year
- Mountain Areas 0.5 acre feet per acre per year
- MST Groundwater Deficient Area 0.3 acre feet per acre per year

Assessors Number(s)	Parcel	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
Winery Parcel		16.8 ac	0.5 AF/acre	8.4 AF

020-450-014 & Ptn. -015 / -016

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:		PROPOSED USE:	
Residential	0.75 af/yr	Residential	0 af/yr
Farm Labor Dwelling	0 af/yr	Farm Labor Dwelling	0 af/yr
Winery	0 af/yr	Winery	0.8 af/yr
Commercial	0 af/yr	Commercial	0 af/yr
Vineyard*	0 af/yr	Vineyard*	0 af/yr
Other Agriculture	0 af/yr	Other Agriculture	0 af/yr
Landscaping	0 af/yr	Landscaping	0 af/yr
Other Usage (List Separately):		Other Usage (List Separately):	
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
TOTAL:	<u>.75</u> af/yr	TOTAL:	<u>0.8</u> af/yr
TOTAL:	<u>244,388</u> gallons**	TOTAL:	<u>260,680</u> gallons**

*Water use for vineyards should be no lower than 0.2 AF—unless irrigation records are available that show otherwise.

**To determine your existing and proposed total water use in gallons, multiply the totals (in acre-feet) by 325,821 gal/AF.
325,851

Is the proposed use less than the existing usage () Yes (X) No () Equal

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage of other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary.

This represents the post lot line adjustment scenario proposed with the subject winery use permit application.

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: Michael R. Muehler Date: 9/23/2009 Phone: 707-320-4968



Attachment A: Estimated Water Use Guidelines

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Livestock (sheep or cows)	0.01 acre-feet per acre per year

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Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

Industrial:

Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

Commercial:

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year

NOTE: PROJECT REVISION
WELLS TO BE
SEPARATED.

Hornisher, Trish

From: Mike Muelrath [Mike@appliedcivil.com]
Sent: Wednesday, March 03, 2010 8:37 AM
To: Hornisher, Trish
Cc: Withrow, Kim; Edward Wallis; juliaia@comcast.net
Subject: Wallis - Water System Clarification

Trish,

I reviewed the water system information / requirements that we discussed yesterday with Edward. He has decided to have the existing lower well be the sole water source for the winery (castle and carriage house). The other two wells in the vineyard will continue to serve the residences and vineyard. There will be no intermingling of the water from the lower well with the upper wells/vineyard/residence water system.

I hope this helps to clarify. I'll call you later this morning to discuss further.

Thank you,

Mike

Mike Muelrath, P.E.
Principal

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2074 West Lincoln Avenue
Napa, CA 94558

www.appliedcivil.com